

REMARKS

This Amendment is filed in connection with a Request for Continued Examination in response to the Final Office Action dated mailed Jan. 16, 2008 and the Advisory Action dated April 4, 2008. The Applicant respectfully requests reconsideration of the rejections presented therein. All objections and rejections are respectfully traversed.

Claims 1-28 are pending in the case.

Claims 1, 3, 4, 5, 6, 18, 25, 27 and 28 have been amended.

No new claims have been added.

Claim Rejections - 35 U.S.C. §103

At paragraphs 4-7 of the Final Office Action, claims 1-4, 12-16, 18-20, and 24-28 were rejected under 35 U.S.C. §103(a) over Ishwar et al., U.S. Publication No. 2004/0017816 (hereinafter "Ishwar"), in view of Casey, Publication No. 2003/0142674 (hereinafter "Casey").

The Applicant's claim 1, representative in part of the other rejected claims, sets forth:

1. In a data network comprising a plurality of nodes, a method for transferring data packets between a source node and a destination node contained in the network, wherein the source node and destination node belong to the same particular virtual-local-area network (VLAN), the method comprising the steps of:

establishing a virtual port associated with the destination node, *the virtual port supporting a plurality of connections that are each associated with a VLAN*, a particular connection associated with the particular VLAN;

maintaining a single control structure for the virtual port, the single control structure storing information associated with each connection of the plurality of connections;

acquiring a data packet from the source node, wherein the packet is associated with the particular VLAN and contains a destination address associated with the destination node; and

transferring the packet to the destination node over the particular connection via the virtual port.

Ishwar discusses “logical ports” to for passing VLAN packets. *See* abstract and paragraph 40. A logical port is bound to a particular physical port and to a particular “VLAN tunnel” connecting to a destination. *See* paragraph 0037 and 0039. That is, “one logical port is established for each connection by binding the logical port to the corresponding physical port and to the respective VLAN tunnel. For example, logical port LP_{3,600} is bound to physical port P₃ and stacked VLAN tunnel 600... logical port LP_{3,610} is bound to physical port P₃ and stacked VLAN tunnel 610, and logical port LP_{3,620} is bound to physical port P₃ and stacked VLAN tunnel 620.” *See* paragraph 0041.

Casey discusses providing “virtual bridges” that maintain separate contexts for different customers. *See* abstract and paragraph 0037. The “virtual bridges” have “virtual bridge ports” for passing traffic. *See* paragraph 0038. “VC tunnels” may be established from a “virtual bridge port” and lead to “virtual bridge ports” of other devices. *See* paragraphs 0039-0040 and Fig 5. 400, 402, 404, and 406.

The Applicant respectfully urges that Ishwar and Casey do not teach or suggest the Applicant’s claimed “*the virtual port supporting a plurality of connections that are each associated with a different VLAN*” and “*maintaining a single control structure for the virtual port, the single control structure storing information associated with each connection of the plurality of connections.*”

In the Applicant’s claimed technique, a single control structure is maintained for a virtual port that supports a plurality of connections, each connection associated with a different VLAN. In this manner, the need to maintain a separate control structure for each connection is obviated, reducing the consumption of resources. As the Applicant discusses in the specification this addresses a noted shortcoming of prior implementations. At page 3, lines 7 to 15 the Applicant discusses:

Another problem associated with coupling VLANs via VCs is that in some intermediate nodes a separate control structure may be maintained for each VC....Often, the number of control structures available in an intermediate node is limited due to limited resources available to the node, e.g., a limited amount of memory storage. Consequently, if the number of dispersed entities in a VLAN is quite numerous and requires many VCs, an intermediate node in the network may not have sufficient resources to maintain control structures for all the VCs needed to couple the entities belonging to the VLAN.

Neither Ishwar nor Casey suggest maintaining a single control structure for a virtual port that supports a plurality of connections, each connection associated with a different VLAN. Ishwar binds each logical port to a single VLAN tunnel (i.e., so that logical ports are VLAN specific, bound to them in a one-to-one relationship). Thus, if anything, Ishwar teaches away from what the Applicant claims. One following Ishwar's teaching would think they needed multiple ports and control structures to provide for multiple different VLANs.

Casey does not remedy the shortcoming of Ishwar. Casey merely discusses "virtual bridges" that have "virtual bridge ports" for passing traffic on "VC tunnels." Casey's VC tunnels are not each associated with a different VLAN. Similarly, Casey is silent regarding maintaining a single control structure storing information associated with each VC tunnels of a plurality of VC tunnels.

In summary, the Applicant respectfully urges that the combination of Ishwar and Casey is legally insufficient to make obvious the claims under 35 U.S.C. §103(a) due to the absence of a teaching or suggestion of "*the virtual port supporting a plurality of connections that are each associated with a different VLAN*" and "*maintaining a single control structure for the virtual port, the single control structure storing information associated with each connection of the plurality of connections.*"

At paragraph 8 of the Final Office Action, claims 5, 8 and 17 were rejected under 35 U.S.C. §103(a) over Ishwar, in view Casey, in further view of Delaney et al., U.S. Patent No. 6,937,574 (hereinafter “Delaney”).

The Applicant respectfully urges that each of these claims is a dependent claim that depends from an independent claim that is believed to be allowable. Accordingly, these dependent claims are believed to be allowable due to their dependency, as well as for other independent reasons.

At paragraphs 9 of the Final Office Action, claims 6, 7, 9 and 21 were rejected under 35 U.S.C. §103(a) over Ishwar.

The Applicant respectfully urges that this rejection is improper. Claims 6, 7, 9 and 21 are dependent claims that depend from independent claims 1 and 18. The Examiner agreed at page 4 and page 6 of the Final Office Action that Ishwar alone does not teach every element of claims 1 and 18 respectively. Thus, rejection of claims that depend from claims 1 and 18 over Ishwar alone is believed to be improper.

Further the Applicant respectfully urges that claims 6, 7, 9 and 21 depend from independent claims that are believed to be allowable. Accordingly, these dependent claims are believed to be allowable due to their dependency, as well as for other independent reasons.

At paragraph 10 of the Final Office Action, claims 10, 11, 22 and 23 were rejected under 35 U.S.C. §103(a) over Ishwar, in view of Casey, in view of “the background of the invention of Ishwar et al.”


The Applicant respectfully urges that each of these claims is a dependent claim that depends from an independent claim that is believed to be allowable. Accordingly, these dependent claims are believed to be allowable due to their dependency, as well as for other independent reasons.

Should the Examiner believe telephonic contact would be helpful in the disposition of this Application, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

In summary, all the independent claims are believed to be in condition for allowance and therefore all dependent claims that depend there from are believed to be in condition for allowance. The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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